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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,069	07/08/2003	Eric Endicott	10136-002	7899
29391	7590	07/01/2005	EXAMINER	
BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A. 390 NORTH ORANGE AVENUE SUITE 2500 ORLANDO, FL 32801			YAM, STEPHEN K	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,069	ENDICOTT, ERIC	
	Examiner	Art Unit	
	Stephen Yam	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Kidder et al. US Patent No. 5,457,757.

Regarding Claim 17, Kidder et al. teach (see Fig. 4) a fiber optic illumination system comprising an illumination source (140) for producing a light beam, a plurality of optical fibers (134), each fiber configured to receive a respective portion of a light beam at a coupling end (adjacent to (136)) and to radiate the respective portion of the light beam at an illumination end (going into (120)) for illumination, and a planar light switch (136) comprising a plurality of light attenuating pixels (see Col. 4, lines 28-36), the light switch positioned between the illumination source and the optical fiber coupling ends (see Fig. 4), each of the pixels being electronically controllable (with logic circuit (146)- see Col. 4, lines 31-33) for selectively coupling portions of the light beam to respective coupling ends of the optical fibers (see Col. 4, lines 28-36 and 52-58).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder et al. in view of Schnell US Patent No. 6,685,159.

Regarding Claims 1-6 and 13-16, Kidder et al. teach (see Fig. 4) a fiber optic control system comprising an illumination source (140) for producing a light beam, a plurality of optical fibers (134), each fiber arranged to receive a respective portion of the light beam at a coupling end (adjacent to (136)) and to conduct the respective portion of the light beam to an illumination end (going into (120)), a planar light switch (136) comprising a plurality of light attenuating pixels (see Col. 4, lines 28-36), the light switch positioned between the illumination source and the optical fiber coupling ends (see Fig. 4), each of the pixels being electronically controllable for selectively coupling portions of the light beam to respective coupling ends of the optical fibers (see Col. 4, lines 28-36), and a plurality of light activated indicators (122), each indicator circuit optically coupled to the respective illumination end of the optical fiber (see Col. 4, lines 52-58), lines and responsive to the respective portion of the light beam radiated from the respective illumination end for providing a control signal (see Col. 4, lines 56-58) to a remotely located device (120). Regarding Claim 13, Kidder et al. teach a method of controlling remote devices comprising directing a light beam (from (140) through (138)) at a first side (adjacent to (138)) of a selectively transmissive planar light switch (136), allowing portions of the light beam to be transmitted through the switch onto respective coupling ends (adjacent to (136)) of a plurality of optical fibers (134) positioned for receiving portions of the light beam at a second side (adjacent to (134)) of the switch (see Col. 4, lines 28-36), and optically coupling respective

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illumination ends (going into (120)) of the optical fibers (see Col. 4, lines 52-58) to respective light activated indicators (122) so that the portion of the light radiated from the illumination end activates the light activated indicator to control a remote device (120). Regarding Claims 2 and 15, Kidder et al. teach a controller (146) coupled to the planar light switch for selectively controlling a light attenuation property of each of the pixels of the planar light switch (see Col. 4, lines 28-33). Regarding Claim 4, Kidder et al. teach a lens (see Fig. 4) positioned between the illumination source and the planar light switch for directing the light beam onto the planar light switch. Regarding Claims 5 and 16, Kidder et al. teach at least one pixel of the planar light switch aligned with a respective coupling end of at least one optical fiber (see Col. 4, lines 28-33). Regarding Claims 6 and 14, Kidder et al. teach the planar light switch as a liquid crystal display (see Col. 3, lines 29-35). Kidder et al. do not teach the light activated indicator as a circuit. Schnell teaches (see Fig.4) a fiber optic control system with an illumination source (112) for producing a light beam and an optical fiber (114) having a coupling end (adjacent to (112)) and an illumination end (adjacent to (110)) and a light activated circuit (110), each circuit optically coupled to the illumination end of the fiber and responsive to the respective portion of the light beam radiated from the respective illumination end for providing a control signal (see Col. 5, lines 3-15) to a remotely located device (94), with the light activated circuit comprising at least one of a phototransistor, a photo diode, or a photo resistor (see Col. 5, lines 3-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system of Kidder et al. with the light activated circuits of Schnell, to provide control for circuitry or other electrical components.

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Regarding Claims 7-10, Kidder et al. in view of Schnell teach the system in Claim 1, according to the appropriate paragraph above. Kidder et al. do not teach the illumination source comprising an electroluminescent or semiconductor light source, with the semiconductor light source as a light emitting diode or a laser semiconductor or an array of semiconductor light sources. It is well known in the art to provide an electroluminescent light source or a light emitting diode or a laser semiconductor or an array of semiconductor light sources as a light source for an optical system, to provide the appropriate illumination properties for the system to optimally operate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the illumination source comprising an electroluminescent or semiconductor light source, with the semiconductor light source as a light emitting diode or a laser semiconductor or an array of semiconductor light sources, in the system of Kidder et al. in view of Schnell, to provide an appropriate light source according to desired optical characteristics, system cost, power requirements, or any other design considerations.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder et al. in view of Schnell, further in view of Cuda US Patent No. 4,773,723.

Regarding Claim 11, Kidder et al. in view of Schnell teach the system in Claim 1, according to the appropriate paragraph above. Kidder et al. do not teach a heat shield mounted between the illumination source and the planar light switch for reducing heat transmitted from the illumination source to the planar light switch. Cuda teaches (see Fig. 1-3) a light source for a fiber optic system (see Col. 2, lines 29-32), with a heat shield (30) mounted between an illumination source (70) and the fiber optic ports (16, 26, 36). It would have been obvious to one

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of ordinary skill in the art at the time the invention was made to use the light source having the heat shield mounted between the illumination source and any external components, as taught by Cuda, with the fiber optic ports of Cuda connecting to the fibers (138) of Kidder et al., in the system of Kidder et al. in view of Schnell, to transmit heat out of the light source to reduce the possibility of heat damage, as taught by Cuda (see Abstract and Col. 1, lines 54-59).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder et al. in view of Schnell, further in view of Suzuki JP04-062515.

Regarding Claim 12, Kidder et al. in view of Schnell teach the system in Claim 1, according to the appropriate paragraph above. Kidder et al. do not teach the plurality of optical fibers arranged in a two-dimensional array at respective coupling ends. Suzuki teaches (see Fig. 1) a similar fiber optic system with an illumination source (10), a plurality of optical fibers (51) with coupling ends (50), and a planar light switch (30), with the plurality of optical fibers arranged in a two-dimensional array at respective coupling ends. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the plurality of optical fibers arranged in a two-dimensional array at respective coupling ends, as taught by Suzuki in the system of Kidder et al. in view of Schnell, to provide multiple outputs to enable interaction with a significant number of external devices.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Wendt US Patent No. 4,422,180, teaches a fiber optic control system controlling a plurality of remotely located devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (571)272-2449. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571)272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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THANH K. LUU
PATENT EXAMINER